WHAT IS CLAIMED IS:

1. A method for removing a gaseous bubble confined in a microvolume of liquid in a chamber, said method comprising:

(a) providing in fluid communication with said chamber a source of said liquid and a barrier region and an exit region wherein said source of said liquid has an energy potential as regards movement of said gaseous bubble that is higher than the energy potential of said barrier region, said barrier region has a higher energy potential than said chamber, and said chamber has a higher energy potential than said exit region, and

(b) reducing the energy potential within said chamber, said source, said barrier region, and said exit region by an amount such that the energy within said gaseous bubble is sufficient to displace said gaseous bubble from said chamber through said barrier region and out said exit region and to fill said chamber with said liquid from said source.

2. A method according to Claim 1 wherein said energy potential is reduced by reducing ambient pressure surrounding said chamber.

3. A method according to Claim 1 wherein said chamber comprises an aperture having an energy potential greater than the energy potential of said barrier region and said exit region.

4. A method according to Claim 1 wherein said aperture is selected from the group consisting of micropores and nanopores.

5. A method according to Claim 3 wherein said chamber is part of a microfluidic system.

6. A method according to Claim 5 wherein said microfluidic system is selected from the group consisting of droplet dispensing devices and microdevices having artificial nanopores.

7. A method according to Claim 3 wherein said exit region is sealed

subsequent to filling of said chamber with said liquid.

8. A method of introducing a liquid into a chamber and avoiding formation of or removing a gaseous bubble therein, said method comprising:

(a) introducing said liquid into said chamber from a source of said liquid wherein said source, a barrier region and an exit region are in fluid communication with said chamber and wherein said source of said liquid has an energy potential as regards movement of said gaseous bubble that is higher than the energy potential of said barrier region, said barrier region has a higher energy potential than said chamber, and said chamber has a higher energy potential than said exit region, and

(b) reducing the energy potential within said chamber, said source, said barrier region, and said exit region by an amount sufficient that the energy within said gaseous bubble is sufficient to displace said gaseous bubble from said chamber through said barrier region and out said exit region and to fill said chamber with said liquid from said source.

9. A method according to Claim 8 wherein said energy potential is reduced by reducing ambient pressure surrounding said chamber.

10. A method according to Claim 8 wherein said chamber comprises an aperture having an energy potential greater than the energy potential of said barrier region and said exit region.

11. A method according to Claim 8 wherein said aperture is selected from the group consisting of micropores and nanopores.

12. A method according to Claim 10 wherein said chamber is part of a microfluidic system.

13. A method according to Claim 12 wherein said microfluidic system is selected from the group consisting of droplet dispensing devices and microdevices having artificial nanopores.

14. A method according to Claim 10 wherein said exit region is sealed subsequent to filling of said chamber with said liquid.

15. An apparatus comprising:

(a) a chamber,

(b) a source of liquid in fluid communication with said chamber,

(c) a barrier region in fluid communication with said chamber,

(d) an exit region in fluid communication with said chamber, and

(e) an aperture in a wall of said chamber.

16. An apparatus according to Claim 15 wherein said aperture is selected from the group consisting of micropores and nanopores.

17. An apparatus according to Claim 15 wherein said chamber is part of a microfluidic system.

18. An apparatus according to Claim 17 wherein said microfluidic system is selected from the group consisting of droplet dispensing devices and microdevices having artificial nanopores.

19. An apparatus according to Claim 17 further comprising a means for sealing said exit region.